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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,436	05/09/2001	Avneesh Agrawal	010198	4990

23696 7590 09/05/2006

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EXAMINER	
SHAH, CHIRAG G	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/852,436	AGRAWAL ET AL.	
	Examiner	Art Unit	
	Chirag G. Shah	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12-29* is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (WO 00/59123) in view of Easton (US Patent No. 5,764,687).

Regarding claims 1, 2, and 5-10, a processor for processing a plurality of channels **[see fig. 4 and abstract]** comprising:

a shift register **[shift register 400 and 402, see fig. 4]** and shifting in I and Q samples, wherein a plurality of the I and Q samples are accessible in parallel fashion **[see fig. 4 and page 7, lines 20-33, where the data in shift registers 400 and 402 are shift I and Q samples in parallel]**;

a parallel sum calculator for receiving the plurality of I and Q samples and producing an I and Q result **[see fig. 4 and page 8, lines 19-29, each time the data in shift registers change, new sums are calculated in parallel in summers 420 and 422]**; and

Agrawal fails to explicitly disclose a scheduler for controlling the shift register and the parallel sum calculator such that they are time-shared to produce results in sequence for each of the plurality of channels; and further teach that an a finger front end, access terminal, access point, a CDMA2000, a W-CDMA, and an HDR systems includes a receiver for processing a plurality of channel as disclosed. Easton teaches in fig. 4 and claim 1 of a plurality of finger

front ends for receiving spreading signals and performing signal processing. Easton discloses in fig. 6 and col. 24, lines 19-21 of a combiner timing generator which controls I and Q accumulators 110 and 112 along with the despreaders that function of shift incoming I and Q samples of fig. 3. Furthermore, Easton clearly establishes in fig. 4 and in the background of processing the plurality of channels using a CDMA and finger front end processor. Since the background supports spread spectrum, it would have been obvious in the art to apply this invention for related systems spread spectrum systems such as HDR, CDMA2000 and wireless access point LAN systems. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Easton to include the features of a scheduler controlling the shift register and the accumulator. One is motivated as such in order to speed up the demodulation of signals in a spread spectrum multiple access system.

Regarding claim 3, Agrawal discloses in figure 4 of a further comprising a digital signal processor for configuring each of the plurality of channels and receiving their corresponding outputs as claim.

Regarding claim 4, Agrawal discloses in fig. 4 and respective portions of the specification further comprising a searcher for determining channel parameters and providing then to the digital them to the digital signal processor for configuration of each of the plurality of channels therewith as claim.

Regarding claim 11, Agrawal discloses [see fig. 4 and page 8, lines 19-29, each time the data in shift registers change, new sums are calculated in parallel in summers 420 and 422] wherein the parallel sum calculation comprises:

generating a plurality of I and Q PN sequence values each cycle according to the channel [see page 7, lines 20-36 and page 8, lines 19-29 and fig. 4];

dispreading the plurality of I and Q samples with the plurality of I and Q PN sequence values to produce a plurality of despread I and Q results [see page 8, lines 19-29 and fig. 4];; and

summing the plurality of despread I and Q results to produce the I and Q result [see fig. 4, summers 430 and 432] as claim.

Allowable Subject Matter

3. Claims 12-29 allowed.

Response to Arguments

4. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G. Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7682. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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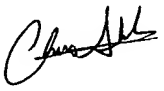
August 31, 2006



Chirag Shah
Patent Examiner, 2616